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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,138	06/25/2003	Vetrivel Ayyavu	03-0289	3430
7590	05/11/2005		EXAMINER	
PETER SCOTT INTELLECTUAL PROPERTY LAW DEPARTMENT LSI LOGIC CORPORATION 1551 McCARTHY BLVD. M/S D-106 MILPITAS, CA 95035			TRUJILLO, JAMES K	
			ART UNIT	PAPER NUMBER
			2116	
DATE MAILED: 05/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/606,138	AYYAVU ET AL.
	Examiner	Art Unit
	James K. Trujillo	2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 February 2005.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 4,13 and 19-31 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-3, 5-12 and 14-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment dated 2/14/05.
2. Claims 1-3, 5-12 and 14-18 are presented for examination. Claims 4, 13, and 19-31 are directed to non-elected species and are withdrawn from consideration.
3. The rejections are respectfully maintained and reproduced infra for applicant's convenience:

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 1-3, 5-12, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (AAPA) in view of Cortopassi et al., U.S. Patent 5,974,588.
6. As to claim 1, AAPA teaches power management for a Serial ATA interface comprising a first power saving mode (partial and slumber states, paragraphs 1 and 2).

AAPA does not disclose a method of automatic power management control comprising: detecting an idle condition of the Serial ATA interface; measuring the idle time of said Serial ATA interfaces when said Serial ATA is idle; and placing said Serial ATA interface into a first power saving mode when said idle time is equal to a first value.

Cortopassi teaches a device having a method of automatic power management control comprising detecting an idle (predetermined time-out period of inactivity, a preset period of inactivity, or expiration of a timer) condition of the device (col. 7 lines 23-26, col. 8 lines 10-12 and col. 9 lines 59-65), measuring the idle time of the device when device is idle and placing the device into a first power saving mode (local standby, sleep mode or suspend modes) when said idle time is equal to a first value (a preset period of inactivity).

Cortopassi further teaches wherein the device is an interface for receiving user input. Cortopassi teaches that automatically entering power saving modes reduces power consumption (col. 2 lines 28-36). Cortopassi also would suggest automatically entering low power states would optimally reduce power consumption to those of ordinary skill in the art. In Cortopassi power is used only when activity requires power, to the extent possible. Therefore the system of Cortopassi optimally reduces power. While the invention of Cortopassi is directed toward a device that is a user interface, those of ordinary skill would recognize that the automatic entry into a power saving mode is applicable to any system or device having at least one power saving mode with a reasonable expectation of success.

It would have been obvious to one of ordinary skill in the art, having the teachings of Cortopassi and AAPA before them at the time the invention was made, to modify the entry of power saving mode of the Serial ATA interface disclosed by AAPA to include the automatic power management control taught by Cortopassi, in order to obtain a Serial ATA interface with automatic power control.

One of ordinary skill in the art would have been motivated to make this combination in order to reduce power consumption of the Serial ATA interface. Furthermore, this reduction of power would be optimal.

7. As to claim 2, AAPA together with Cortopassi taught the method according to claim 1 as described above. Cortopassi further teaches wherein said first power saving mode is a Partial power state (a local standby, col. 7 line 22 through col. 8 line 6).

8. As to claim 3, AAPA together with Cortopassi taught the method according to claim 1 as described above. Cortopassi teaches having a Slumber mode (sleep mode, col. 6-17) as a power saving mode that uses less power than the Partial power mode state. AAPA together with Cortopassi do not disclose wherein said first power saving mode is a Slumber mode. However, it would have been obvious to one of ordinary skill in the art to further modify AAPA together with Cortopassi to change the first power saving mode to the Slumber mode. One of ordinary skill would have made this modification to further reduce power consumption of the interface.

9. As to claim 5, AAPA together with Cortopassi taught the method according to claim 1 as described above. AAPA together Cortopassi further teaches wherein said placing into a first power saving mode comprises issuing a request for said first power saving to a physical layer of said Serial ATA interface by hardware when said idle time is equal to said first value. Specifically, Cortopassi discloses that a request is sent for said power saving mode to a physical layer (specific devices are placed into a static state, col. 7 lines 23-26) by hardware (a controller 129 in figure 4 and col. 5 lines 36-46) when idle time is equal to said first value (a timeout period, col. 7 lines 23-27). As combined with AAPA, the physical layer would a physical layer

with the Serial ATA interface corresponding to the physical layers associated with Partial and Slumber states disclosed by AAPA.

10. As to claim 6, AAPA together with Cortopassi taught the method according to claim 1 as described above. AAPA together with Cortopassi further teaches placing said Serial ATA interface into a second power saving mode when said idle time is equal to a second value, wherein said first power saving mode is a Partial power state, and said second power saving mode is a Slumber power state. Specifically, Cortopassi teaches a second power mode (sleep state, as set forth hereinabove) at another preset period of inactivity.

11. As to claim 7, AAPA together with Cortopassi taught the method according to claim 6 described above. One of ordinary skill will interpret that because the second power saving mode reduces power more than the first power saving mode in Cortopassi it would follow that the second value is greater than the first value.

12. As to claim 8, AAPA together with Cortopassi taught the method according to claim 6 as described above. AAPA together with Cortopassi taught wherein comprising a request for Slumber power state to a physical layer (most devices place in static states – Cortopassi, col. 8 lines 12-15) of Serial ATA interface by hardware (a controller 129 in figure 4 and col. 5 lines 36-46).

13. As to claim 9, AAPA together with Cortopassi taught the method according to claim 1 as described above. Cortopassi further teaches comprising de-asserting a power down request when said device is active (waking devices when activity is detected, figure 5). It would follow when combined with AAPA that the Serial ATA interface would do the same with each of its components.

***Response to Arguments***

14. All rejections of claim limitations as filed prior to Amendment dated 14 February 2005 not argued in their entirety or substantively in the response to the prior Office action have been conceded by Applicant and the rejections are maintained from henceforth. As noted by the applicant in the remarks, claims 10-12 and 14-18 are also rejected on the same rationale as claims 1-3 and 5-9, because they do not recite limitation above those in claims 1-3 and 5-9.

15. Applicant's arguments filed 14 February 2005 have been fully considered but they are not persuasive.

16. Applicants argue in substance that Cortopassi fails to disclose "detecting an idle condition of said Serial ATA interface". The examiner agrees with the applicants that Cortopassi does not disclose "detecting an idle condition of said Serial ATA interface". However, Cortopassi is not relied upon to teach the "Serial ATA interface" portion of the claim. Cortopassi is relied upon to teach detecting an idle condition of an interface. That is why reference to AAPA is relied upon to teach the Serial ATA interface. As would be understood AAPA does not teach the combination of "detecting an idle condition of said Serial ATA interface", however AAPA teaches using a Serial ATA interface. Thus, the combination of AAPA and Cortopassi teaches "detecting an idle condition of said Serial ATA interface".

17. Applicants also argue in substance that Cortopassi is nonanalogous art and thus cannot be relied upon to reject claim 1. The examiner does not agree. First, it is noted that the applicants, make reference to a "Kauffman" reference in the arguments in the first sentence of page 11. The previous office action does not reference a Kauffman reference. It is believed the applicants are

referring to Cortopassi rather than Kauffman. In response to applicant's argument that Cortopassi is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the instant application from which AAPA is relied upon has been classified in the same field of endeavor as Cortopassi. Specifically, both the application and Cortopassi are classified in class 713, subclass 323. Thus, both AAPA and Cortopassi are in the same field of endeavor. Furthermore, Cortopassi is reasonably pertinent to the particular problem with which the applicant is concerned. Specifically, both Cortopassi and the applicant are concerned with reducing power to a particular device after a particular time period has elapsed. For the foregoing reasons the applicant's argument with regard to Cortopassi being nonanalogous art is not persuasive.

### ***Conclusion***

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James K. Trujillo whose telephone number is (571) 272-3677. The examiner can normally be reached on M-F (7:30 am - 5:00 pm) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Trujillo  
May 9, 2005



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